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OECD/INES/NETWORK A

Review of Assessment Activities

Issue 19 July 2005

In this Issue

Hello to our friends and colleagues in the INES project! This July 2005 newsletter presents information on assessments that cover "non-traditional" domains, which we defined to include programs that assess students' knowledge, skills, attitudes, and/or behaviors in a domain other than those academic subjects or disciplines that historically have been covered. From our nine responding countries, we learned about new and innovative assessments of students' information communication technology skills, values and attitudes, and vocational skills. The scale of these programs varied; some countries described established nationwide assessment programs while others reported local studies or research still in early planning stages.

Also included in this issue is a country highlight focusing on the education and assessment system in Iceland – a primer just in time for Network A members' upcoming plenary session, which will be held in Reykjavík in October. The article provides an overview of the different levels of education and information on national and international student assessments. As usual, the newsletter also provides updates on Networks A, B, and C, and the PISA Governing Board, and a brief look at what is currently happening in national assessment and testing and examination programs in member countries.

We thank all those who contributed to the newsletter, especially Julius K. Björnsson, from the Icelandic Testing Institute, for contributing the article on Iceland's education system; Dan Andersson of Sweden for updating us on Network B; and Jaap Scheerens and Maria Hendriks of the Netherlands for sharing information on Network C. We appreciate your efforts in keeping us informed of activities from around the INES Project. We hope you enjoy the latest newsletter!

Beyond the Reading, Math, and Science–Assessments in Other Domains

In several previous issues of this newsletter, we've inventoried countries' assessment and testing and examination systems focusing on academic achievement. However, given the interest of policy makers in many countries' to learn about a broad range of students' competencies, we thought it would be interesting to add to the inventory by asking our members about assessments – existing or planned – that cover other, "non-traditional" domains. These include assessments, questionnaires, and other studies that assess students' knowledge and skills in a domain other than a traditional academic subject or discipline.

Drawing upon information from nine countries (Australia, Austria, Belgium [French community], Mexico, Norway, Sweden, Switzerland, the United Kingdom, and the

United States), this article highlights both national and regional activities that focus on assessing students' information technology skills, skills in vocational subjects, civics and citizenship, and their outlooks on learning and their school environments.

Attitudes and values questionnaires

Three countries (**Mexico**, **Norway**, and **Sweden**) reported an interest in assessing students' values and attitudes towards school and learning, and in all cases, the approach is with a self-report questionnaire.

Norway described an extensive nationally developed system of questionnaires called Pupil Inspectors (*Elevinspektørene*). Pupil Inspectors is an online questionnaire directed at students in lower and upper secondary education that is used for local evaluation and improving educational quality. The system is based on the perspective that data on factors stimulating learning are necessary for improving the quality of education and that students' own experiences and views on teaching and learning are essential elements of schools' self-evaluation.

The main purpose of Pupil Inspectors is to collect and analyze students' opinions of their education and other factors that are important for learning and well being in learning institutions. While Pupil Inspectors is a compulsory evaluation tool for all schools, the system allows each school to formulate their own questions based on a data bank and to create additional questionnaires for teachers and parents. All students in seventh grade of upper primary education, tenth grade at the lower secondary level, and first grade of upper secondary school are required to complete the questionnaire. The questions cover the following six topics: motivation for learning, bullying, student participation, democracy involving students and their parents, the physical environment, and the social environment. Results from Pupil Inspectors are used in planning the development of quality education at the school, municipal, county, and national level.

Like Norway, **Sweden** also conducts a nationwide survey on students' attitudes towards school. This Swedish study, first conducted in 1993, collects data on the attitudes of students, parents, and teachers. The study is conducted every three years, and results from the most recent cycle of data collection were published in 2004. The survey consists of items on various topics, including bullying, stress, trust in the school, and democracy. Data are collected through phone interviews and questionnaires, and results are published in a report put out by *Skolverket*, the National Agency for Education.

Finally, our respondent from **Mexico** noted that its educational authorities and parents associations are interested in assessments of both students' attitudes and values and knowledge of civics (see below). However, perhaps because of the technical complexity of these types of studies, the only initiative in this direction takes place at a research center in one state's local university and is still in the early stages of planning.

Civics and citizenship assessments

In addition to Mexico, **Australia** also reported an interest in assessing students' knowledge of civics. The country recently introduced a national assessment on civics and citizenship as part of its Measurement Framework for National Key

Performance Measures. The framework outlines the reporting process for the education system's progress towards reaching Australia's *National Goals for School in the Twenty-First Century*. The goals, set out by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA), state that students should meet high standards of knowledge, skills, and understanding through a comprehensive and balanced curriculum during the compulsory years of schooling. In relation to civics and citizenship, the goals specify that students should be active and informed citizens with an understanding of and appreciation for Australia's system of government and civic life.

The civics and citizenship assessment is conducted by the Performance Measurement and Reporting Taskforce (PMRT), a working group of MCEETYA, which consists of representatives from national and state/territory education departments and non-government school authorities. The first assessment was administered in late 2004, and students will be assessed every three years in Years 6 and 10. The results of this assessment are reported on two scales built from direct assessments and self-report questionnaires: the civics knowledge and understanding scale and the participation skills and civic values scale. The test is based on a stratified random sample of students that is representative of the types of schools (e.g., government, Catholic, or independent schools) in each jurisdiction and the student subgroups by which results are disaggregated. At the national level, the subgroups to be reported are: all students; male and female; indigenous and non-indigenous; language background English and language background other than English (LBOTE); metropolitan, provincial, and remote geographic locations; and socio-economic background. At the state/territory level, results are reported for all students and disaggregated by gender. Reports are produced for each cycle of the assessment and provide descriptive statistics, such as multiple comparisons, standard deviations, variances, and proficiency levels.

Information technology and technology-based assessments

In addition to the civics and citizenship assessment, **Australia** also plans to administer an assessment on information and communication technology (ICT) as another tool for monitoring the education system's progress towards achieving the national goals. For ICT, the goals specify that students should be confident, creative, and productive users of new technologies by the time they leave school. The first ICT assessment will be administered this year (2005) between September and November. Like the civics and citizenship test, the PMRT will conduct the assessment every three years in Years 6 and 10. Results will be reported and analyzed using the same approach and method as the civics and citizenship assessment.

Similar to Australia, the **United Kingdom** also is planning to introduce an ICT assessment. Pilot testing is planned for 2006 and 2007, and the test will be administered in 2008 pending a successful pilot test. The assessment will cover the full content of the ICT program of study at Key Stage 3 and will be given at the end of that stage in addition to existing tests in English, mathematics, and science. Most students will take the test at the end of Year 9 (age 14), although some may complete the program of study and take the test at the end of Year 8 (age 13). The computerized test will be marked electronically and will consist of a series

of tasks involving the use of spreadsheets, databases, or websites. National- and school-level results will be published by the Department for Education and Skills (DfES) with the results from other Key Stage 3 tests. These results will contribute to the wide range of data used by schools for self-evaluation and improvement plans and will provide a basis for target-setting, performance monitoring, and comparisons with other similar schools on both the local and national level. National data also will be used in a variety of ways, including comparing the progress of children in different schools and measuring performance against national targets.

Unlike the Australian and English ICT assessments that test students' ICT skills, a technology-based assessment in the **United States** uses computer technology to assess students' problem-solving abilities. This study, problem solving in a technology-rich environment (TRE), is part of a technology-based assessment project conducted by the National Assessment of Educational Progress (NAEP), a nationally representative ongoing assessment of American students in various academic subjects. The project is designed to help understand how the use of computer technology will impact NAEP assessments. The specific purpose of the TRE study is to develop an example set of computerized modules to assess students' problem-solving abilities through multimedia tasks that cannot be delivered through traditional paper-and-pencil assessments.

TRE is being developed in three phases: (1) a pilot test with about 50 students; (2) a pretest with 100 to 500 students to resolve issues in scaling the study up for a full sample; and (3) data collection through a field test with a nationally representative sample of 1000 to 1500 students. The pilot test was administered in November-December 2001 and January 2002 to approximately 50 eighth-grade students, and the pretest was conducted between mid-March and May 2002, in a sample of schools participating in the NAEP 2002 reading and writing assessments.

Cross-curricular competencies assessments

Like Australia and the United Kingdom, **Switzerland**'s Ministry of Education also

Learning about a Broad Range of Students' Competencies	
Topics • Civics and citizenship (e.g., knowledge, participation and attitudes) • Information technology skills • Problem solving in a technology-based assessment • Cross-curricular competencies (e.g., self-regulated learning) • Vocational and other subjects • Attitudes, perceptions, and behaviors (e.g., school environment, trust)	**Approaches** • Direct written assessments • Self-report questionnaires • Technology-based platforms • Hands-on tasks • Student portfolios

is interested in testing students' ICT competence, among other domains such as students' teamwork/cooperation and their preparedness for lifelong learning. Although no national assessment of these non-traditional domains has been developed, the Swiss canton of Zurich has conducted a study to assess the extent to which *gymnasiums* (university preparatory schools) effectively develop cross-curricular competencies. This system monitoring study attempted to answer the following questions: (1) Do schools effectively develop cross-curricular competencies in students? (2) Do schools differ in attaining this goal? and (3) What types of instructional programs produce better results?

Data collection focused primarily on self-regulated learning and also provided some information on students' health and behavior and well being at school. Questionnaires were distributed to students in all Zurich schools in 2001 and 2004 and thus provide data for two points in time. The study also included a longitudinal component as tenth-grade students tested in 2001 at the beginning of the school year were tested again as twelfth-grade students in 2004 at the end of the school year. A report on the results was published, and each school received information on their own results in comparison to other schools.

Belgium (French community) also is interested in measuring cross-curricular competencies and is developing an assessment tool for the first cycle of secondary school (seventh and eighth grades). Researchers are working closely with small groups of teachers who teach the same students within the same schools but who focus on different subjects. Each group selects the cross-curricular competencies that the teachers feel their courses should contribute to developing, such as effective communication of results or well-articulated answers to questions. The assessment tool for these skills is in the form of a student portfolio that records information such as student performance on specific tasks and teacher-student discussions on the student's progress and weaknesses. The first stage of research focused on defining a schedule for the project, initiating the collaboration among the teachers, and orientating teachers to the portfolios. Next, the groups worked to adapt their teaching sequences, build specific assessment tools, and experiment with the tools on a small scale. In the last stage, the entire process and the impact of the tools on students' competences and motivation will be assessed.

Although not an assessment specifically designed to measure students' cross-curricular skills, **Austria** administers two sets of final exams that contain cross-curricular elements. The first exam, the *Fachbereicsarbeit*, is a written exam intended to prepare students for the second exam, the final oral examination taken upon graduation from upper secondary school. As an example, a student may take a final oral exam in geography and economics with a focus on informatics. This exam would test the student's content knowledge in the subjects of geography and economics and also would require the student to use informatics tools such as diagrams, charts, or tables. The main goal of these exams is to connect students' knowledge in various disciplines and to foster independent thinking and the skills necessary for scientific work.

Examinations in vocational subjects

Like the final exams administered in upper secondary school, the final exams

for vocational education in **Austria** also contain cross-curricular components. These assessments help ensure the quality of vocational education in Austria, which is important to stakeholders in both the economic and education system. Responsibility for vocational programs involve numerous levels of government, including the Federal Ministry of Economics and Labor; the Federal Ministry for Education, Science and Culture; and regional education boards. Our correspondent provided three examples of final exams administered as part of the Austrian vocational education system.

- The first example describes the exams for students participating in the apprenticeship training system. By the time students complete this training, they are expected to possess both the skills needed to perform their job and certain key traits like independence, teamwork, and responsibility. The first part of the final exam consists of a practical component in which the candidate must produce a piece of work or perform a specific service related to their trade. The second part is a theoretical oral and written exam that may be waived if students successfully complete a part-time vocational school.

- The second example describes the two final exam options for graduates of upper secondary engineering school. The first option, diploma work, requires students to complete a one-year engineering team project performed in collaboration with a technical company or laboratory, to prepare a written report, and to present it before an expert panel. The second alternative is 35 hours of exam work in which students complete tasks using various procedures, such as laboratory experiments or data processing.

Interested in knowing more about these assessments and studies? Check out these websites for more information.

Country	Name of Organization/Assessment	Web address
Australia	Performance Measurement and Reporting Taskforce (PMRT)	www.mceetya.edu.au/taskfrce/task224.htm
Austria	Educational standards	www.bmbwk.gv.at/medienpool/11369/pa_bildungsstandards.pdf
		www.bmbwk.gv.at/Schulen/unterricht/ba/bildungsstandards.xml
		www.gemeinsamlernen.at
	Work assessment reports	www.htl-innovativ.at
Norway	Pupil Inspectors (*Elevinspektørene*)	www.elevinspektorene.no
Sweden	National Agency for Education	www.skolverket.se
United Kingdom	ICT assessment	www.ks3ictpilot.com
United States	Problem-solving in Technology-rich environment (TRE)	http://nces.ed.gov/nationsreportcard/studies/tbaproject.asp

- The last example provided by our correspondent details the final exam of students graduating from vocational schools (grade 11), higher vocational schools (grade 13), and vocational colleges (grade 14 and 15). These students must complete practical exams in which they perform tasks related to their trade. Tests include instruction subjects such as project management and are related to the students' selected field of concentration (e.g., fashion marketing or visual art).

Like Austria, **Sweden** also is interested in assessing vocational education. The National Agency for Education is currently developing an item bank for various subjects in compulsory and secondary school. So far, most assessments are of traditional academic subjects, but plans are underway to expand the item bank to include vocational subjects.

Evaluations in other domains

In addition to the traditional academic subjects, the Swedish item bank also currently contains an assessment of home and consumer studies for ninth-grade students in compulsory education. In 1992 and again in 2003, **Sweden** conducted a national evaluation of the compulsory school system using a representative sample of students. Students in grades five and nine took tests in 16 subjects, including art, home and consumer studies, physical education and health, music, and textiles and woodwork and metalwork. The study also included questionnaires directed towards students, teachers, parents, and school administrators. Several reports have been published based on the results and have been the subject of numerous debates.

Network A

Network A last met in Stockholm, Sweden, on March 3-4, 2005. The key topics discussed at this meeting were: the indicators for *Education at a Glance* (EAG) 2005, the technical evaluation of the Program for International Student Assessment (PISA), and Network A's future work. Each working group also presented updates on their work.

Members first reviewed the revised draft indicators for EAG 2005 and offered their thoughts and comments on the content and language. These indicators draw upon data from both PISA and the Trends in International Mathematics and Science Study (TIMSS) and this year's submission will include indicators on the following topics: achievement in eighth-grade mathematics and science from two points in time; mathematics, reading, and scientific literacy of 15-year-olds; problem-solving abilities of 15-year-olds; and between- and within-school variation in mathematical literacy.

At the meeting, members also welcomed several guests who gave presentations on their work. Eugene Gonzales, a member of the expert panel for the technical review of PISA, presented updates on the panel's work. The presentation focused on the panel's statement of work, which focuses on evaluation of the methods used to ensure stable trend lines in PISA. The group subsequently met in May to establish specific research questions and study designs; preliminary analysis has been carried out; and a preliminary report was given to the PISA Strategic Development Group (SDG) by the chair of the group, Ron Hambleton. A full report is expected by the October Network and PGB meetings and to inform the next Terms of Reference for PISA.

Another presentation was made by Seamus Hegarty from the International Association for the Evaluation of Educational Achievement (IEA), who spoke about the organization's activities and future plans. The presentation included a suggestion to form a high-level standing group of the key players in international comparative education studies in order to exchange information more formally. In addition to discussing this suggestion, members also raised questions regarding the assessment of foreign languages, longitudinal studies, and distinctions between PISA and TIMSS.

Much of the discussion focused on the Network's future work and the possibility of Network A undertaking technical assistance work in the area of strategic development for the adult competencies assessment. Scott Murray, the director of the Adult Literacy and Lifeskills (ALL) Survey, gave a presentation on past work conducted in this area. Taking into consideration members' input, the Network Chair will submit a proposal to OECD regarding the role Network A might serve in providing assistance to the International Expert Group for the Program of International Assessment for Adult Competencies (PIACC).

Following these discussions, each of the three working groups gave presentations updating members on their activities. The data working group is continuing to focus on two issues: the consolidation of information on national data collections and the development of a strategy for coordination between OECD and IEA and other groups. The working group on

development has been exploring a number of topics: competency for the knowledge society, value-added studies, feasibility of assessing older students, assessing adult competencies, and teaching competencies. The analysis, reporting, and dissemination subgroup is working on a proposal for EAG indicators and is collecting examples of national analyses of international assessment data.

The next Network A meeting will be in Reykjavík, Iceland, on October 6-7, 2005, following the PGB meeting October 3-5.

Network B

Network B last met on May 24-25, 2005, in Helsinki, Finland. The meeting focused on development work in the following areas: transition from education to work, social outcomes of learning, continuing education and training (CET), and economic outcomes. Network members and working groups presented updates and facilitated discussions for each area of work.

On the topic of transition from education to work, discussion first focused on the development of the monitoring transition systems (MTP) project. The goal of the MTP project is to develop indicators to monitor transition systems, and five steps were proposed to further the development work: (1) submit an inventory of policy goals; (2) select transition indicators in OECD publications; (3) analyze and update goals; (4) identify indicators; and (5) identify data sources. Members also discussed the policy goals related to the new OECD thematic review on transition from education to work and data sources for this review. A number of indicators can be developed based on school-leaver surveys, and Network B was identified as a suitable platform for promoting international standardization of these surveys.

The meeting continued with a presentation by two Network members on the proposed plans for the project on social returns to education. The first phase would last two years and would produce two sets of expert papers. The first would consist of a review of empirical and theoretical issues, and the second set would focus on measurement issues in selected areas, such as health or civic and social participation. Following members' discussion on these domains, the Network agreed to proceed with this project. The Network also decided to continue with work in the mapping of supply skills in strategic educational and occupational groups.

Next, the working group on continuing education and training presented an update on their work to other Network members. The group decided to compile data on policy goals from various sources and suggested several new indicators, including CET expectancy, intensity of CET, and characteristics of persons with high degrees of training. After members' discussion, the Network decided to develop an indicator on CET expectancy for *Education at a Glance* 2006 that would incorporate both formal and non-formal education, if possible.

Following the discussion on CET, a member updated the Network on the development of an indicator on dispersion of earnings by level of educational attainment. Although originally organized as a pilot data collection, the large number of participating countries qualified the data for inclusion in EAG 2005. The Network discussed ways to improve or to expand the indicator and elected to form a new working group on education and

earnings that also would work on the issue of returns to adult learning.

The meeting concluded with a discussion on Network B's long-term strategy. Members affirmed that the Network would continue to focus on the production of indicators of outcomes of education, with working groups as the primary tool for furthering development work. Thus, future work will depend less on plenary meetings, which will now occur once a year. The next Network B meeting will take place in March or May 2006, in Washington, D.C.

Network C

In the period December 2004 to June 2005, Network C's main activities have focused on the production of indicators for EAG 2005; the planning of new system-level indicators for EAG 2006 and beyond; the quality review of the annual Network C data on instruction time, teachers' working time, and teachers' salaries; the further development and preparation of the survey on teachers, teaching, and learning; and, together with Network A, the further development of a comparative teaching/learning effectiveness study. Network C last met in Vienna, Austria, on April 20-22, 2005.

For EAG 2005, Network C updated its three core indicators: teachers' working and teaching time, instructional time, and salaries. This year, for the first time, the indicator on intended instruction time also discusses the extent of out-of-school instruction received by 15-year-old students as well as the relationship between instruction time and student learning outcomes. In addition, for each Network C core indicator, the data from the 2003 OECD-INES Network C survey on decision-making in public lower secondary education are used to show the level of government responsible for establishing the respective topics of decision-making. Furthermore, two new indicators are included. The first contrasts public and private providers, including their comparative student performance in PISA 2003, and the second uses PISA 2003 data to examine institutional differentiation and its relationship to student performance.

In early 2005, the Network C subgroup on regular indicators undertook a data quality review of the annual indicators. The review was divided into three topics: (1) curriculum (classroom subjects); (2) teaching time and working time; and (3) all issues related to teacher salaries and compensation. The subgroup reviewed all available material (e.g., notes on countries' data submissions) and developed a survey that was completed by nearly all countries involved in the Network C data collection. The survey pro-vided a wealth of information regarding the weaknesses and strengths in the comparability of the data. At its meeting in Vienna, the Network also formulated

Upcoming Meetings

October 3-5, 2005
PISA Governing Board (Iceland)

October 6-7, 2005
Network A (Iceland)

November 30, December 1-2, 2005
Network C (Switzerland)

March or May 2006
Network B (United States)

proposals for improvement to be implemented in the 2005 data collection.

In addition to the data quality work, the subgroup on regular indicators also undertook a number of activities with the goal of improving the regular indicators. These activities included: exploring possibilities for developing alternative standards for comparing teacher salaries, discussing ideas for a Teacher Working Conditions index, and reviewing the relationship between system-level indicators and both other indicators published in *Education at a Glance* as well as data available in the INES database.

Concerning new system-level indicators, the Network at its Vienna meeting discussed and endorsed the proposals for system-level policy-related indicators on evaluation and accountability, integration and segregation of lower secondary schools, equity, and administration costs. The Network C Secretariat will further develop the proposals in cooperation with individual Network members who volunteered to co-develop the indicators.

With regard to the international survey of teachers, the Network discussed both the survey proposal as it was presented at the meeting of the Joint Session in April and further preparatory work, including agreeing on a process for priority-rating of the survey content. The survey of teachers seeks to provide relevant policy indicators in the areas of attracting, developing, and retaining effective teachers; school policies and effectiveness; and the quality of teachers and teaching. A survey cycle in multiple waves is proposed, allowing for variation in the types of teachers sampled and the policy issues covered. For the first wave, it is proposed to sample teachers at the lower secondary level and to include an experimental survey strand, which links the teacher survey to PISA 2006 schools, for those countries that wish to pursue it. With regard to policy issues, the first wave would cover the repeated indicators identified in the priority-rating exercise and the first-order priorities among the remaining issues as well as questions specific to the focus on ISCED 2 teachers and to the science focus of PISA 2006. The Network agreed on the survey proposal and priority-rating exercise and made recommendations on issues to be addressed in the final proposal. Members and contacts of Network C then coordinated the priority-rating exercise within each country. Members also agreed to undertake national cost estimates for the survey, subject to further information on sampling.

Finally, the Network discussed the outline and preparatory activities on the long-term strategy on teaching effectiveness, to be carried out by the Network A and C Secretariats. The activities include an analysis of conceptual models on teaching, learning, and student outcomes; the review of the research literature on teaching effectiveness; teaching and learning strategies; an inventory of available instruments; and the design of an internationally comparative pilot study in a limited number of countries. The Network agreed to pursue the preparatory activities.

The next meeting of Network C will be in Montreux, Switzerland, on November 30 and December 1-2, 2005.

PISA Governing Board

The PISA Governing Board (PGB) last met on March 7-9, 2005, in Stockholm, Sweden. The main topics of discussion were the development and implementation of PISA, the launch of PISA 2003, the

international thematic reports, the context questionnaires for PISA 2006, and the strategic development of PISA beyond 2006.

The meeting opened with updates on OECD work related to PISA, the overall development and implementation of PISA since the last PGB meeting, and the development of the PISA 2006 science assessment. The subsequent discussion focused on the presented topics, including the new survey on teachers, teaching, and learning; the development of the computer-based science assessment; and the reporting scales on which the science assessment would be based.

Next, the meeting turned to a report and discussion on the launch of PISA 2003. Overall, the release was considered a success. However, embargo breaks occurred in several countries, and at the meeting, members discussed options for follow-up action. The Secretariat also summarized national outputs, countries' dissemination activities, and main policy themes highlighted in national debates. Members asked the Secretariat to follow up with countries in June 2006 on these same topics in order to continue tracking the dissemination process and to further optimize processes for future releases.

The meeting then shifted to the topic of international thematic reports. Following progress reports and an update on the last Editorial Group meeting, the PGB established a procedure for the production of future reports. The PGB first would commission various experts to write a series of smaller research papers focusing on the theme. Then, the OECD Secretariat would use these papers to develop the thematic report in consultation with the PGB. The PGB adopted this procedure for a report on school characteristics, organization, and structure, which will be published in early 2007. The PGB also requested a report on the use of and access to information technology and a report on international migration and student performance. The reports should be published in 2005 and 2006, respectively. Members also discussed the possibility of replacing printed summary reports with web-based country profiles that would continuously integrate results from PISA analyses.

Next, members reviewed the progress on the development of context questionnaires for PISA 2006. Discussion centered on a several topics, including plans to hold an open forum to discuss the questionnaires' field trial results, criteria for judging the appropriateness and quality of background questions, and scaling methods for summarizing attitudinal data.

The meeting concluded with a discussion regarding the strategy paper for the development of PISA beyond 2006 and the outcomes of the PISA Strategic Development Group meeting in early March. The PGB decided to work towards a more effective core PISA program rather than to substantially change the current design. Members agreed that decisions regarding design changes and the range of international options (e.g., additional age levels and target populations to assess or inclusion of a grade-based survey component) should be determined through written consultations from countries. The PGB also discussed a number of proposals, including suggestions to strengthen the minor assessment domains and to relate PISA to other international assessments.

The next PISA Governing Board meeting will take place in Reykjavík, Iceland, on October 3-5, 2005.

Country Highlight:
The Icelandic Education System and National Assessments

Prepared by
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A fundamental principle of the Icelandic education system is that everyone should have equal opportunities to acquire an education, irrespective of sex, economic status, residential location, religion, possible handicap, and cultural or social background. Education in Iceland traditionally has been organized within the public sector. Almost all private schools receive public funding; there are very few institutions in the school system that are completely private.

Organization of the Icelandic education system

The education system in Iceland is divided into four levels.

Preschool education (leikskóli)

Preschool education is governed by the Preschool Act, No. 78/1994. Preschools are defined by law as the first level of the education system and provide education for children who have not reached six years of age, which is the point at which compulsory education begins. In preschool, children receive education and support for their all-around development, thus preparing them for compulsory school and life itself. At the preschool level, the nucleus of the edu-cational work is play.

Compulsory education (grunnskóli)

Compulsory education is governed by the Compulsory School Act, No. 66/1995. Compulsory education is organized in a single-structure system; primary and lower secondary education form one level and generally take place in the same building. The law concerning compulsory education stipulates that education is mandatory for children and adolescents between the ages of six and 16. The main aims of compulsory education are to:

- prepare pupils for life and work in a continually developing democratic society;
- meet the nature and needs of its pupils and encourage the development, health, and education of each individual;
- give students an opportunity to acquire knowledge and skills; and
- cultivate work habits that promote a continuous interest in seeking education and self-development.

The organization of schools and the work that takes place in them is thus to be guided by tolerance, Christian values, and democratic cooperation. Schoolwork is intended to lay the foundation for independent thinking and to train pupils' abilities to cooperate with others.

Upper secondary education (framhaldsskóli)

Upper secondary education is governed by the Upper Secondary School Act, No. 80/1996. Upper secondary education is not compulsory, but any student who has completed compulsory education or is 18 years of age has the right to enter a course of studies in an upper secondary school. Students are usually between 16 and 20 years of age. General academic education is primarily organized as a four-year course leading to a matriculation examination. The length of the courses in vocational education varies, lasting from one to ten semesters, but four-year courses are the most prevalent. An effort must be made to give pupils a choice of subjects and forms of instruction in accordance with their needs and wishes. The primary aims of upper secondary education are to prepare students for life and work in a democratic society by offering them suitable opportunities to learn and to develop individually and to prepare them for employment through specialized studies leading to professional qualifications or further study.

Higher education (háskóli)

Icelandic higher education is governed by the Universities Act, No. 136/1997. There are currently eight higher education institutions in Iceland; most are run by the state while three are managed by private parties with state support. Universities are entrusted with the task of carrying out research and offering higher education programs in different subjects, as stipulated by the legislation governing each institution. Institutions of higher education differ in the extent to which they engage in research and the number of programs of study they offer.

Management structure

The Icelandic Parliament is legally and politically responsible for the education system. It determines its basic objectives and administrative framework. All education comes under the jurisdiction of the Ministry of Education, Science and Culture, with the exception of a few specialized schools. The education system, to a large extent, has been decentralized both with regard to responsibilities and to decision-making. This reflects a general trend in Icelandic society. Local municipalities are responsible for the operation of preschools and primary and lower secondary schools, while the state runs the upper secondary schools and institutions at the higher education level.

The Ministry issues the National Curriculum Guidelines for compulsory and upper secondary education. These National Curriculum Guidelines are intended both to provide the detailed objectives necessary to implement the law and to offer direction as to how the law should be carried out in practice. In addition, the Ministry issues National Curriculum Guidelines for preschools that specify the aims that preschools are to follow and that describe the basic means and attitudes that apply in the education of young children.

The National Center for Educational Materials (under the auspices of the Ministry of Education, Science and Culture) develops and publishes educational materials for compulsory schools and distributes them to schools free of charge.

The Educational Testing Institute is an independent institution funded by the state through the Ministry of Education, Science and Culture. The institution is

responsible for organizing, setting, and grading the nationally coordinated examinations and for undertaking comparative analysis of the education system through participation in international surveys.

Education expenditures

Local municipalities fund the construction and operation of preschools and primary and lower secondary schools. Parents pay fees for their children to attend preschools. Compulsory education (primary and lower secondary), including the cost of textbooks and other materials, is paid for by the state and is free of charge for all students.

The operating costs of upper secondary education also are funded by the state. Construction costs and initial capital investment for equipment are divided between the state and the municipalities, which pay 60 and 40 percent, respectively. Education at the upper secondary level is free, but students are charged for enrollment fees and the cost of their textbooks. Students in vocational education pay a materials fee. University-level institutions receive annual budget allocations, which they themselves administer. State institutions at the higher education level charge registration fees, while private institutions charge tuition fees. Instruction in state institutions at the higher education level is considered to be free for students, many of who receive loans from the Icelandic Student Loan Fund.

A more detailed description of the Icelandic education system can be found at the Ministry of Education website (http://eng.menntamalaraduneyti.is) and at the Eurydice website (http://www.eurydice.org/).

National assessments

The Icelandic national assessments are administered three times during students' progression through compulsory school and once during upper secondary school. The content of the tests is based on the National Curriculum Guidelines published by the Ministry of Education. Each test assesses material corresponding to about three years of schooling. The assessments are administered in fourth, seventh, and tenth grade in compulsory school and in the third or fourth year of upper secondary school, depending on each student's progress.

The national assessments are conducted annually in Icelandic and mathematics at the fourth- and seventh-grade levels. These tests are compulsory and are completed by about 97 percent of each cohort.

The fourth-grade assessment tests students in Icelandic (reading and listening, spelling, grammar, and writing) and mathematics (numbers and operations, geometry, and statistics. The content of the seventh-grade assessment also consists of Icelandic (reading and listening, spelling, grammar, and writing) and mathematics (numbers and operations, geometry, statistics, fractions, and pre-algebra).

The tenth-grade tests are electives. Currently, tests are offered in six subjects:

- Icelandic (reading and literature, spelling, grammar, and writing),
- mathematics (numbers and operations, geometry, fractions and percentages, statistics and probability, and algebra),

- English (listening, reading, and writing),
- Danish (listening, reading, and writing),
- natural sciences (physics, chemistry, biology, and astronomy), and
- social sciences (history, geography, and sociology).

Students may decide the number and the subject of the tests they take. About 75 percent of each cohort takes four or five tests. Ninety-five percent of each cohort takes the Icelandic, mathematics, and English tests, and 60 to 70 percent takes each of the remaining three tests. The tenth-grade national assessment can be considered a high-stakes test, as the results are used for upper secondary school admittance. However, upper secondary schools also base their admission decisions on the student's overall lower secondary school performance.

Students planning to enroll in vocational tracks must have the Icelandic and mathematics tests as part of their application. Students planning to attend university preparation tracks need to submit scores from four tests with their application for upper secondary school. The Icelandic, mathematics, and English tests are required for all students preparing for university, with the fourth test depending on the focus of their studies.

Assessment in upper secondary school occurs biannually and consists of three tests (Icelandic, English, and mathematics) and were first held in May 2005. Each pupil must complete two of the three tests in order to graduate from upper secondary school, but no minimum grade is required. These tests are all based on the national curriculum for upper secondary schools published by the Ministry of Education, and all tests contain material from the compulsory/basic courses in each subject. Pupils take these tests during their third or fourth year in upper secondary school.

All of the above-mentioned tests are administered in a standardized fashion in all schools and at the same time at each level all over the country. They are all constructed at the Educational Testing Institute, where piloting and item analysis is done before each test. Additionally, all tests are graded centrally at the Institute, and the Institute also publishes both the final individual results as well as reports on the general results of each test, which include within-country comparisons, school comparisons, and a number of other parameters. These results are used by both local and state education authorities for policy purposes and for monitoring the performance of the whole system. The emphasis of all these assessments is on providing pupils, parents, and teachers with valid and reliable information on individual pupil learning and performance.

International comparative studies

Since 1991, Iceland has participated in a number of international comparative studies. This participation was sporadic until 1995, when Iceland participated in the Trends in International Mathematics and Science Study (TIMSS). Since then, Iceland also has participated in the Programs for International Student Assessment (PISA) and the Progress in International Reading Literacy Study (PIRLS).

It is generally believed that in order to understand student performance, it is not enough only to administer national assessments. Instead, a broader approach is necessary so that the performance

measured on national tests can be evaluated in a broader way. International comparative assessments, such as PISA and PIRLS, are ideally suited to this task. Therefore, the main objective of the Educational Testing Institute is to administer and to work with the results from both these sources, in order to broaden the understanding of the factors that contribute to a successful school system.

An evolving system

The Icelandic education system has undergone various changes in the last decade or so, and the rate of the changes appears to be increasing all the time. The system was relatively static for decades, but changes began to move faster in the last quarter of the twentieth century.

Tertiary education has been evolving at a tremendous rate in the last few years, and the rest of the system will surely follow. In 1995, the responsibility for compulsory schooling was moved from the state to the local authorities, and therefore school autonomy has been increasing gradually. As the international studies have shown, the Icelandic educational system is one of the most homogenous education systems, but this will probably change in the foreseeable future.

The national assessment system also has been evolving constantly since the beginning of the current order in the early '90s, and it also will surely evolve and change along with the whole education system. The national assessments in upper secondary school began in 2004, but this system will evolve as well in accordance with the changing education system. Upper secondary school has been shortened from four years to three years, and the national assessments need to be modified accordingly.

Therefore, many challenges lie ahead in the near future. Not everyone agrees on the value and importance of national assessments, and that discussion will continue. This is, however, a positive state of affairs, as a static system with no critics would probably be an ineffective system that would not be able to follow the rapid changes of modern education.

Information about national assessments and international comparisons is based on material from the Educational Testing Institute website (http://www.namsmat.is).

Among the countries that responded to our request for information, several countries described national assessments activities that occurred between January and June 2005. These activities include test development and examination, reporting of results, and the development of educational standards.

- In **Australia**, a number of assessment activities took place in the past six months. The report on the national sample assessment for Year 6 science was finalized, although it is not yet released. The results of the 2004 national sample assessment in civics and citizenship underwent initial analysis. Final preparations were made for the national sample assessment in information and communication technology (ICT), which will be conducted from September to November 2005. Additionally, the 2001 Year 7 and the 2002 Years 3, 5, and 7 reading, writing and numeracy benchmark results were released. This marks the first publication of nationally comparable data for the performance of Year 7 students, as measured against the national reading, writing and numeracy benchmarks. More information is available at http://www.mceetya.edu.au/public/benchmark.html

- **Austria** is in the process of establishing educational standards for both general and vocational education in order to ensure the quality of education. Standards for the teaching of mathematics and language in general education schools have already been developed, and mathematics standards have been tested in eighth grade in approximately 40 Austrian schools. The results of this pilot test are currently being processed. The development of standards for vocational schools is underway as well and will be introduced in fourth, eighth, and twelfth grade in 2008. Furthermore, in order to better monitor the education system, plans are in progress to collect all available data and to generate an annual national education report.

- A number of assessment activities have occurred in **Mexico** in the past few months. In February, the National Institute for Educational Evaluation (INEE) began developing instruments for assessments in third-grade language, mathematics, natural science, and social science. The INEE also completed the development of new instruments for assessing language (including reading and writing) and mathematics in grades 6 and 9. A national sample of 55,000 students in each grade was assessed in June using the new instruments, and analysis will begin soon. A smaller national sample of students also was tested using previously developed instruments in order to provide a comparison with results from 2000. Additionally, the Ministry of Education has conducted field work for its assessment projects, which include assessments of over seven million students in primary and lower secondary school throughout the country. The work is part of a national incentives system that provides economic rewards for school teachers.

- In **Sweden**, national assessments in Swedish/Swedish as a second language (SSL), English, and mathematics were recently administered in compulsory schools Years 5 and 9. In addition, voluntary assessments in physics, biology, French, German, Spanish, and some vocational subjects were available from the national test bank. Tests are generally administered and scored by teachers, while university institutions work to develop new assessments on behalf of the National Agency for Education. The purpose of the Swedish assessment program is to ensure equity in grading, to present appropriate curriculum structures, to support teacher activities, and to produce follow-up data.

- The **United Kingdom** reported a significant change in 2005 in the assessment administered at the end of Key Stage 1 to students who are approximately seven years old. Although students at this stage are continuing to take the National Curriculum tests/tasks in mathematics and English (reading and writing), teachers now can choose the timing of the tests and the test materials. This change was introduced to address teachers' concerns that a one-time test was a less accurate performance measure for children at this age than a teacher's observation of work done throughout the year. The purpose of the Key Stage 1 assessment is to help the teacher to form an overall measurement of the student's performance. Thus, only the teacher's report, and not the student's test results, is released to parents, local education authorities, and the Department for Education and Skills (DfES). Parents may request the test results for their own child if they wish.

- In the **United States**, several activities are underway related to the National Assessment of Educational Progress (NAEP). National and state assessments in reading, mathematics, and science were administered between January and March. Both national- and state-level assessments were conducted in grades four and eight, and national assessments were administered as well in twelfth grade. A small number of schools also administered pilot tests in civics, economics, reading, mathematics, and U.S. history. In addition to these assessments, two special studies were conducted in 2005. The first study, the National Indian Education Study, seeks to provide a better estimate of American Indian and Alaska Native students' performance on NAEP assessments. This year, the study focused on fourth- and eighth-grade reading and mathematics assessments. The second study, the High School Transcript Study, collected transcripts from graduating twelfth-grade students to use in surveying the curricula offered in high schools and the course-taking patterns of high school students.

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